

### REMARKS

Reconsideration of the above-identified application as amended respectfully is solicited on behalf of the Applicants.

With the instant response, 16 claims have been amended.

Claims 1, 20, 39, and 57 have been amended to correct the informality noted by the Examiner.

Claims 2-3, 21-22, 40-41, and 58-59 have been amended in the interest of clarity to expressly recite temperatures and ranges.

Claims 1, 8, 20, 27, 39, 46, 57, and 64 also have been amended to correct the double included "second interface surface" and to correct the scope of those claims to be commensurate with the invention herein involved.

Claims 1-6, 9-25, and 28-38 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bergerson, U.S. Patent No. 6,090,484, in view of Shores, U.S. Patent No. 5,061,549.

In essence, the Examiner appears to propose to modify the hot-melt adhesive second layer of Bergerson by filling it with the thermally conductive filler of the hot melt adhesive of Shores. Such modification is proposed for the purpose of providing the adhesive of Bergerson with improved thermal conductivity.

However, and as has been noted by the Examiner, the interface of Bergerson already exhibits a thermal impedance of 0.05 °C/W making it more than sufficient for its intended use. Accordingly, it is believed that there would be no reason for filling the adhesive layer, for the purpose of improving the thermal conductivity or otherwise, as no such improvement is necessary for the Bergerson interface to be suite for its intended application.

Moreover, in the Bergerson interface, it is the first layer, formed of a cured silicone polymer, which is filled with a thermally conductive filler and which, it follows, provides the interface with its thermal conductivity. Thus, if anything, one of ordinary skill in the art following the teaches of Bergerson would have been motivated to improve the thermal conductivity of that layer, such as by increasing its filler content or by selection of a more conductive filler, rather than to fill the adhesive layer which could have the tendency to reduce its ability to bond the first layer to the electronic device or heat sink. In this regard, it has been held that that references are not properly combinable or modifiable if their intended function is destroyed. *See In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Accordingly, it is submitted that independent claims 1 and 20 should be considered to properly distinguish over the art made of record. Claims 5-6, 9-19, 21-25, and 28-38 further describe the independent claims, and therefore should be considered allowable for the reasons given in connection with those claims.

Claims 7-8 and 26-27 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bergerson in view of Shores, and further in view of Oeltjen, U.S. Patent No. 6,433,069. Claims 7-8 and 26-27 further describe, respectively, independent claims 1 and 20, and therefore should be considered allowable for the reasons given hereinbefore in connection with those claims.

Claims 39-44, 47-62, and 65-74 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bergerson in view of Shores and Columbier *et al.*, U.S. Patent No. 5,100,737.

The Examiner proposes to modify Bergerson and Shores by reinforcing the graphite layer of Bergerson with metal foil as taught by Columbier *et al.* for the purpose of improving the mechanical strength while reducing electrical resistance and enhancing thermal conductivity.

Independent claims 39 and 57, however, recite an interface arrangement wherein an interior surface of a first layer formed of a flexible tin foil material is joined to an interior surface of a second layer formed of a thermally-conductive phase-change material. The Columbier *et al.* reference, in contrast, teaches arrangements wherein a metal layer is deposited on a layer of flexible graphite. Thus, it is submitted that even if the references were combined in the manner proposed by the Examiner, such arraignment would not be sufficient to render the claims 39 and 57 obvious.

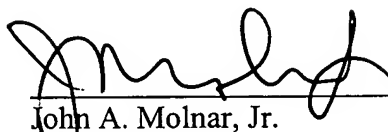
Accordingly, it is submitted that independent claims 39 and 57 should be considered to properly distinguish over the art made of record. Claims 40-44, 47-56, 58-62, and 65-74 further describe the independent claims, and therefore should be considered allowable for the reasons given in connection with those claims.

Claims 45-46 and 63-64 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bergerson in view of Shores and Columbier *et al.*, and further in view of Oeltjen. Claims 7-8 and 26-27 further describe, respectively, independent claims 39 and 57, and therefore should be considered allowable for the reasons given hereinbefore in connection with those claims.

In view of the foregoing remarks, wherein the claim program as amended is believed to define the claimed invention as being patentable over art made of record, the issuance of a Notice of Allowance is earnestly solicited.

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Respectfully submitted,



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I hereby certify that this correspondence is being deposited on November 12, 2003, with the United Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

